

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 February 2006 (09.02.2006)

PCT

(10) International Publication Number
WO 2006/015302 A1

(51) International Patent Classification:
A61B 17/32 (2006.01)

(21) International Application Number:
PCT/US2005/027216

(22) International Filing Date: 29 July 2005 (29.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/592,099 29 July 2004 (29.07.2004) US

(71) Applicant (for all designated States except US): X-STEN
[US/US]; 20 Martin Lane, Englewood, CO 80113 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SCHOMER, Donald [US/US]; 20 Martin Lane, Englewood, CO 80113 (US). SOLSBERG, Murray, D. [US/US]; 15 Huntwick Lane, Englewood, CO 80113 (US). WAY, Bryce [US/US]; , CO (US).

(74) Agents: WATKINS, Marcella, D. et al.; Conley Rose, P.C., P.O. Box 3267, Houston, TX 77253-3267 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

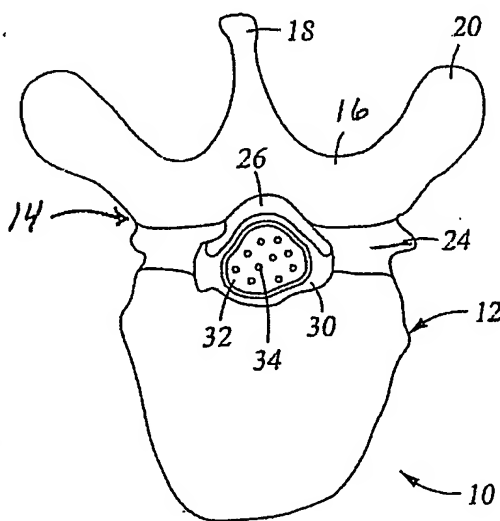
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette

(54) Title: SPINAL LIGAMENT MODIFICATION DEVICES



(57) Abstract: A method for treating stenosis in a spine comprises percutaneously accessing the epidural space in a stenotic region of interest, compressing the thecal sac in the region of interest to form a safety zone, inserting a tissue removal tool into tissue in the working zone, using the tool to percutaneously reduce the stenosis; and utilizing imaging to visualize the position of the tool during at least a part of the reduction step. A tissue excision system for performing percutaneous surgery, comprises a cannula comprising a tissue-penetrating member having a distal end defining an aperture on one side thereof, an occluding member slidably received on or in the cannula and closing the aperture when the occluding member is adjacent the cannula distal end, means for engaging adjacent tissue via the aperture, and cutting means for resecting a section of the engaged tissue.